

**AMENDMENTS TO THE CLAIMS**

Please amend claim 4-6 and 8-9 to read as follows:

1. (Original) A cryo pump including:

a cryogenic refrigerator;

a first-stage panel and a heat shield plate that are cooled in a first stage of the cryogenic refrigerator; and

a second-stage panel that is surrounded in the heat shield plate, is cooled by a second stage of the cryogenic refrigerator, and has an absorbent,

the cryo pump further comprising:

a notch, provided in the heat shield plate, for allowing for entrance of gas molecules; and

an additional shield for preventing entrance of heat due to radiation from a room-temperature cryo pump chamber to the second-stage panel.

2. (Original) The cryo pump according to claim 1, wherein the notch and the additional shield are positioned on the heat shield plate surrounding the second-stage panel therein.

3. (Original) The cryo pump according to claim 1 or 2, wherein the additional shield is supported by the heat shield plate via an additional shield supporting member.

4. (Currently Amended) The cryo pump according to claim 1~~any of claims 1 to 3~~, wherein the refrigerator is a horizontal type and the additional shield has a C-shaped cross section in which a portion corresponding to the refrigerator is cut.

5. (Currently Amended) The cryo pump according to claim 1~~claim 4~~, wherein the additional shield is formed in such a manner that a portion thereof having a C-shaped cross section has a length covering the second-stage panel.

6. (Currently Amended) The cryo pump according to claim 1~~any of claims 1 to 3~~, wherein the refrigerator is a horizontal type or a vertical type and the additional shield is tubular.

7. (Original) The cryo pump according to claim 1 or 2, wherein the additional shield is a concave or convex portion provided on the heat shield plate, and an opening for allowing for entrance of gas molecules is provided on a side face of the concave or convex portion.

8. (Currently Amended) A sputtering apparatus comprising the cryo pump according to claim 1 ~~any of claims 1 to 7~~.

9. (Currently Amended) A semiconductor manufacturing apparatus comprising the cryo pump according to claim 1 ~~any of claims 1 to 7~~.